Service Document
Exchange Set

RRCD 2420 MP3

GRUNDIG

Service Manual

Sicherheit
Safety

Materialnr./Part No.
720108000001

⚠ Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Materialnummer 720108000001, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!

⚠ The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 720108000001, as well as the respective national deviations.

Dieses Service Dokument ist nur in Datenform verfügbar
This Service Document is only available as data

Änderungen vorbehalten/Subject to alteration

Made by GRUNDIG in Germany • HS-41 0305
http://www.grundig.com

ALIGNMENT PROCEDURE

INSTRUMENTS REQUIRED
1. Signal Generator
2. FM Signal Generator
3. FM/AM IF Sweep Generator (10.7 MHz for FM)
4. VTVM
5. Oscilloscope
6. Frequency counter
7. Regulated DC power supply

GENERAL PREPARATION
1. Check source voltage, DC or AC according to specificaions
2. Set function switch to band being aligned
3. Signal input should be kept as low as possible to avoid AGC and AFC function
4. Standard modulation : AM 1 KHz 30% mod
   FM 1 KHz 22.5 KHz dev

AM IF ALIGNMENT

STEP	SIGNAL SOURCE (AM RF Gen.) CONNECT TO	SET SIGNAL TO	ALIGNMENT INDICATOR (Oscilloscope, VTVM) CONNECT TO	SET RADIO DIAL TO	ADJUST	ADJUST FOR	REMARKS
1	A standard radiation loop	450KHz	TP3 Detector output terminal and ground (TP4)	Quiet Point	T601	Maximum	Volume control at min. position
2	Repeat step 1 for max. output						

FM IF ALIGNMENT

This model requires no FM IF alignment as the IF is fixed by ceramic filter and discriminator CF502 or CF503 & CF505. Please take note that correct type and same color dot of ceramic filter is used in servicing, diff color dot of ceramic filter may cause worse IF 'S' curve characteristic and distortion.

Connect IF genescope output terminal to TP3 & TP4 (GND) in series with a 1000Pf capacitor, connect scope input terminal to TP1 & TP2 (GND), then the IF characteristic curve can be observed.

FM RF ALIGNMENT

STEP	SIGNAL SOURCE (FM Signal Gen.) CONNECT TO	SET SIGNAL TO	ALIGNMENT INDICATOR (Oscilloscope, VTVM) CONNECT TO	SET RADIO DIAL TO	ADJUST	ADJUST FOR	REMARKS
1	TP1 & TP2 through matching network if necessary	87.5 MHz (modulated)	Terminals across speaker voice coil	87.5 MHz (Lowest end)	NA	NA	Digital DC Volt meter is Connected to TP 5 and grg
2		108 MHz (modulated)		108 MHz (Highest end)	L604 (Osc. Coil) stretch or squeeze	DC 8V ±0.3V	
3		88 MHz (modulated)		88 MHz	L601 (RF coil) stretch or squeeze	Maximum	Volume control at max. position
4		106 MHz (modulated)		106 MHz	TC 601 (RF trimmer)		
5	Repeat steps 3 and 4 as necessary to minimize tracking error and also steps 1 and 2 if necessary						

AM RF ALIGNMENT

STEP	SIGNAL SOURCE (AM Signal Gen.) CONNECT TO	SET SIGNAL TO	ALIGNMENT INDICATOR (Oscilloscope, VTVM) CONNECT TO	SET RADIO DIAL TO	ADJUST	ADJUST FOR	REMARKS
1	A standard radiation loop ant.	522 KHz (modulated)	Across speaker voice coil	522 KHz (Lowest end)	NA	NA	Digital DC Volt meter is Connected to TP 5 and grg
2		1620 KHz (modulated)		1620 KHz (Highest end)	L 605 (Osc.Coil)	DC 8V ±0.3V	
3		603 KHz (modulated)		603 KHz	L 603 (ant. coil)	Maximum	Volume control at max. position
4		1404 KHz (modulated)		1404 KHz	TC 603 (ant. trimmer)		
5	Repeat steps 3 and 4 as necessary to minimize tracking error and also steps 1 and 2 if necessary						

ALIGNMENT PROCEDURE FOR CD SECTION

Applicable unit :
1 This model is using CD drive unit No. SANYO DA11B3V
2 The alignment for CD section is fully automatic and no adjustment is reguired

GENERAL PREPARATION - 1) Check source voltage, DC or AC according to specifications . 2) Set function switch to Tape being aligned .

A) MEASURING INSTRUMENTS REQUIRED FOR TAPE SPEED AND HEAD AZIMUTH ADJUSTMENT.

(1) TAPE SPEED ADJUST
MTT-111 (3000 Hz) TEST

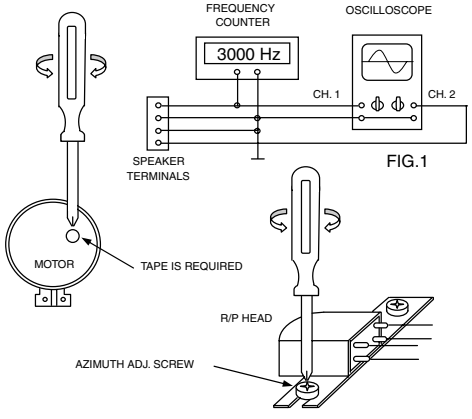


FIG.1

(2) HEAD AZIMUTH ADJUSTMENT .
2.1 - Connect the equipments as shown in the Fig. 1. (The Both Speakers loading Are Required)
2.2 - Insert a test tape (10 KHz : MTT-114) into deck.
2.3 - Press PLAY and set VOLUME at reference output.
2.4 - Adjust the azimuth adjustment screw for the max. & balance ch. output on both ch. of oscilloscope.
2.5 - Secure above screw with glue after adj. completed.

B) EQUIPMENTS REQUESTED FOR AC BIAS FREQUENCY / CURRENT ADJUSTMENT :

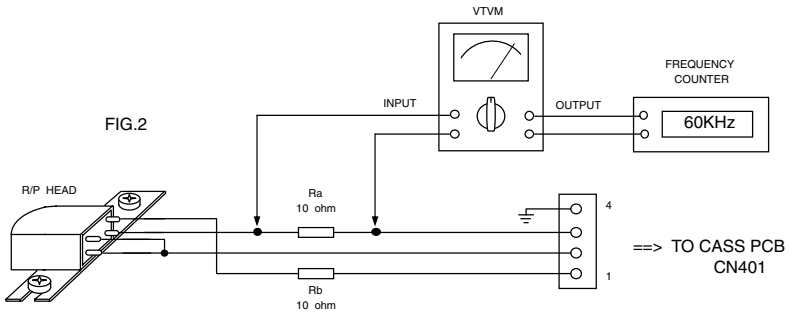
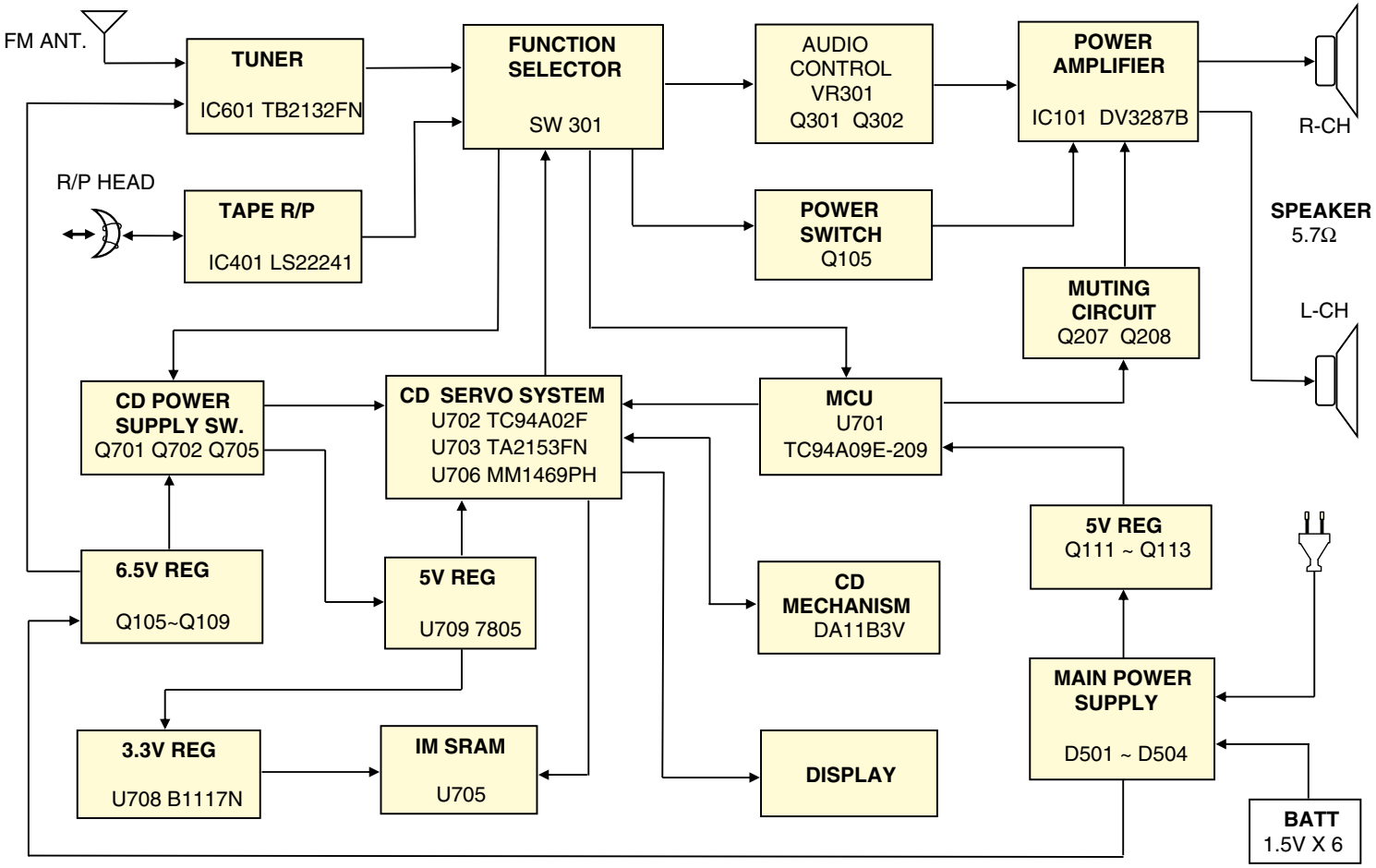
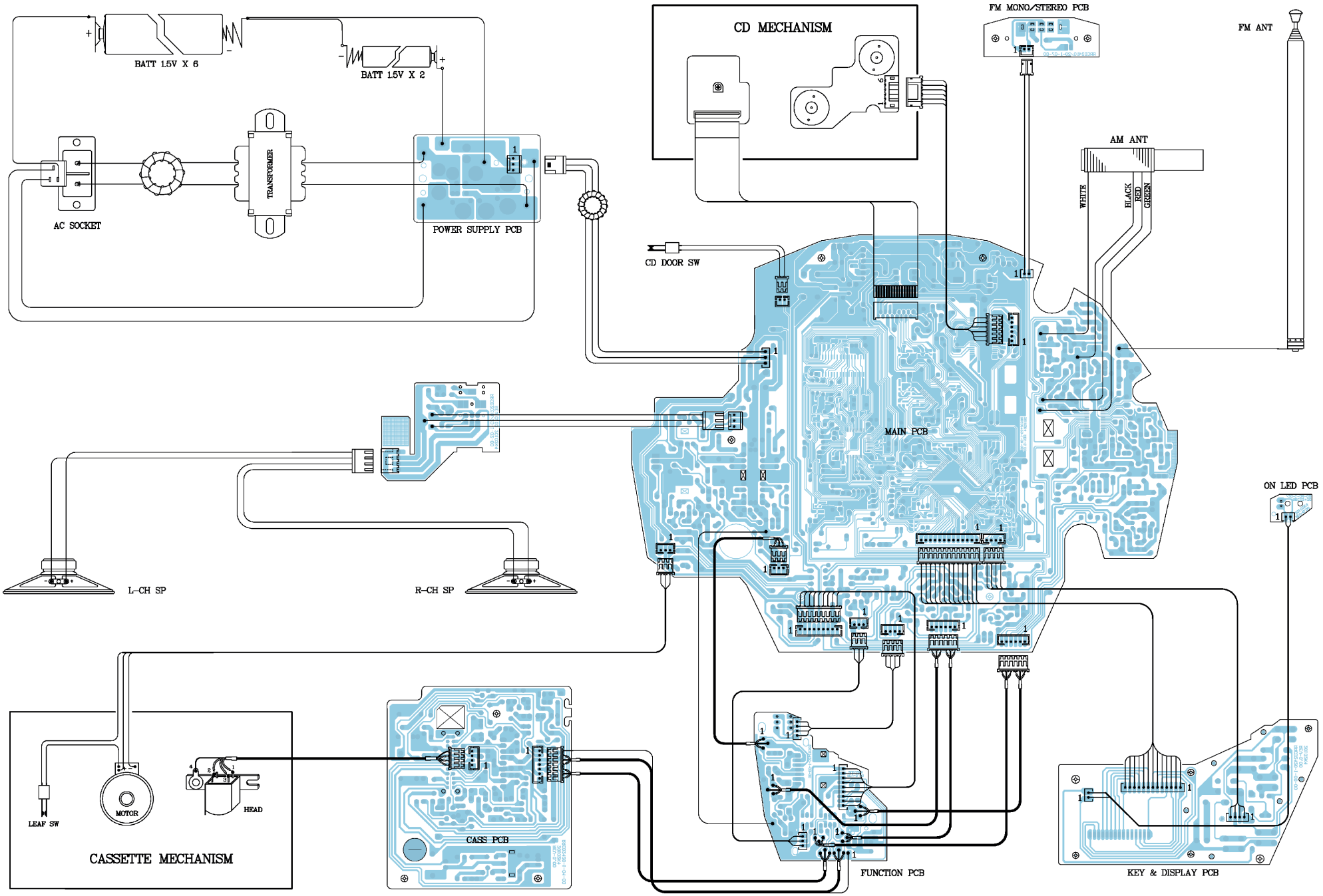


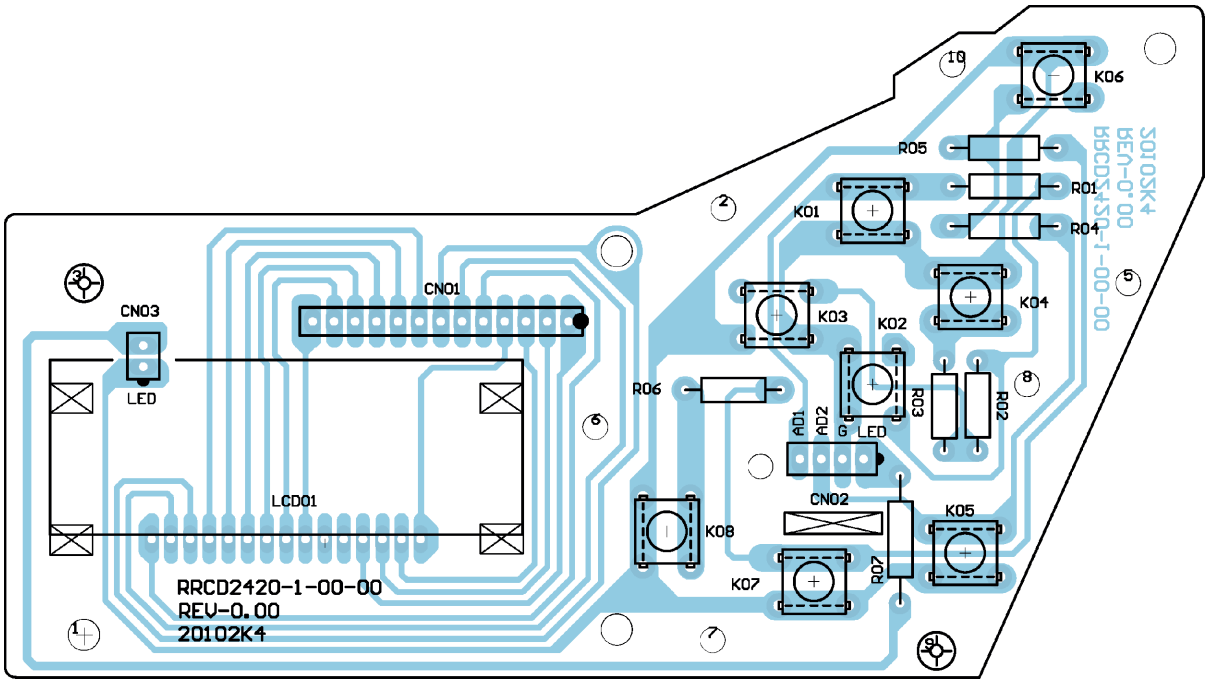
FIG.2

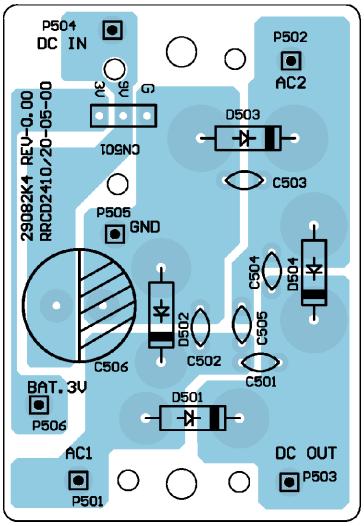
AC BIAS FREQUENCY ALIGNMENT :
Note :The test unit should be keep in recording mode and added two resistors Ra & Rb as shown in the Fig. 2 before alignment. be sure to delete the both resistors Ra & Rb after alignment completed.

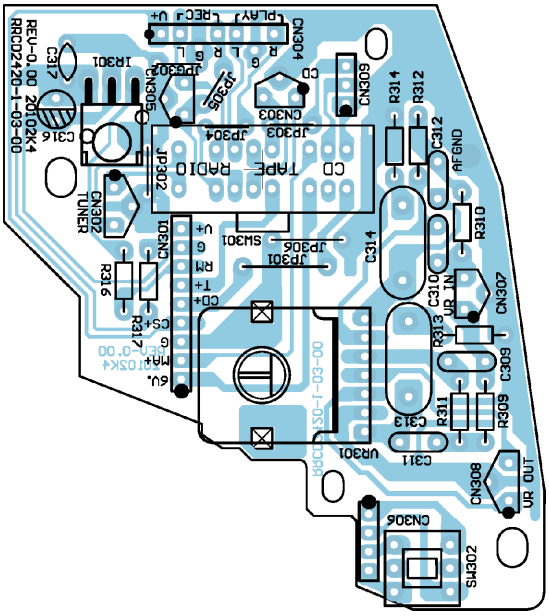
Test Point	Adjust	Frequency at Beat 0	Frequency Observe at		Observe		
			Beat 1	Beat 2	Beat 0	Beat 1	Beat 2
Resistor Ra or Rb	L401	60KHz ± 0.3KHz	54KHz ± 2KHz				

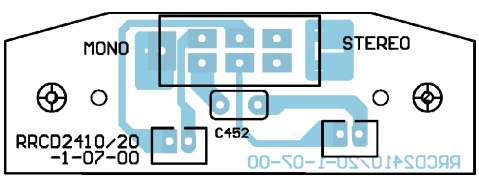

FM ANT.
TUNER
IC601 TB2132FN
FUNCTION SELECTOR
SW 301
AUDIO CONTROL
VR301
Q301 Q302
POWER AMPLIFIER
IC101 DV3287B
R-CH
R/P HEAD
TAPE R/P
IC401 LS22241
POWER SWITCH
Q105
SPEAKER
5.7Ω
MUTING CIRCUIT
Q207 Q208
L-CH
CD POWER SUPPLY SW.
Q701 Q702 Q705
CD SERVO SYSTEM
U702 TC94A02F
U703 TA2153FN
U706 MM1469PH
MCU
U701
TC94A09E-209
5V REG
Q111 ~ Q113
6.5V REG
Q105~Q109
5V REG
U709 7805
CD MECHANISM
DA11B3V
MAIN POWER SUPPLY
D501 ~ D504
3.3V REG
U708 B1117N
IM SRAM
U705
DISPLAY
BATT
1.5V X 6

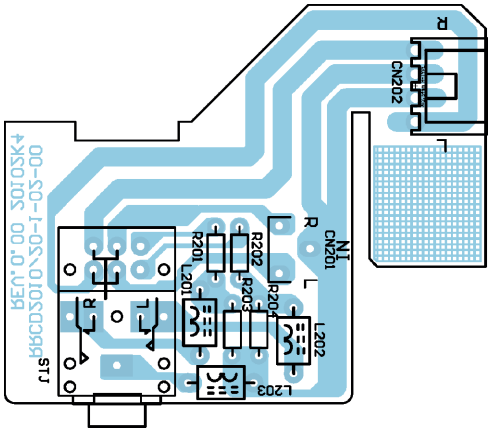

BATT 1.5V X 6
BATT 1.5V X 2
AC SOCKET
TRANSFORMER
POWER SUPPLY PCB
CD MECHANISM
FM MONO/STEREO PCB
FM ANT
AM ANT
WHITE
BLACK
RED
GREEN
CD DOOR SW
MAIN PCB
ON LED PCB
L-CH SP
R-CH SP
LEAF SW
MOTOR
HEAD
CASSETTE MECHANISM
CASS PCB
FUNCTION PCB
KEY & DISPLAY PCB

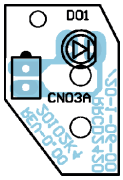

CN03
LED
CN01
LCD01
RRCD2420-1-00-00
REV-0.00
20102K4
K01
K02
K03
K04
K05
K06
K07
K08
R01
R02
R03
R04
R05
R06
R07
AD1
AD2
G
LED
CN02

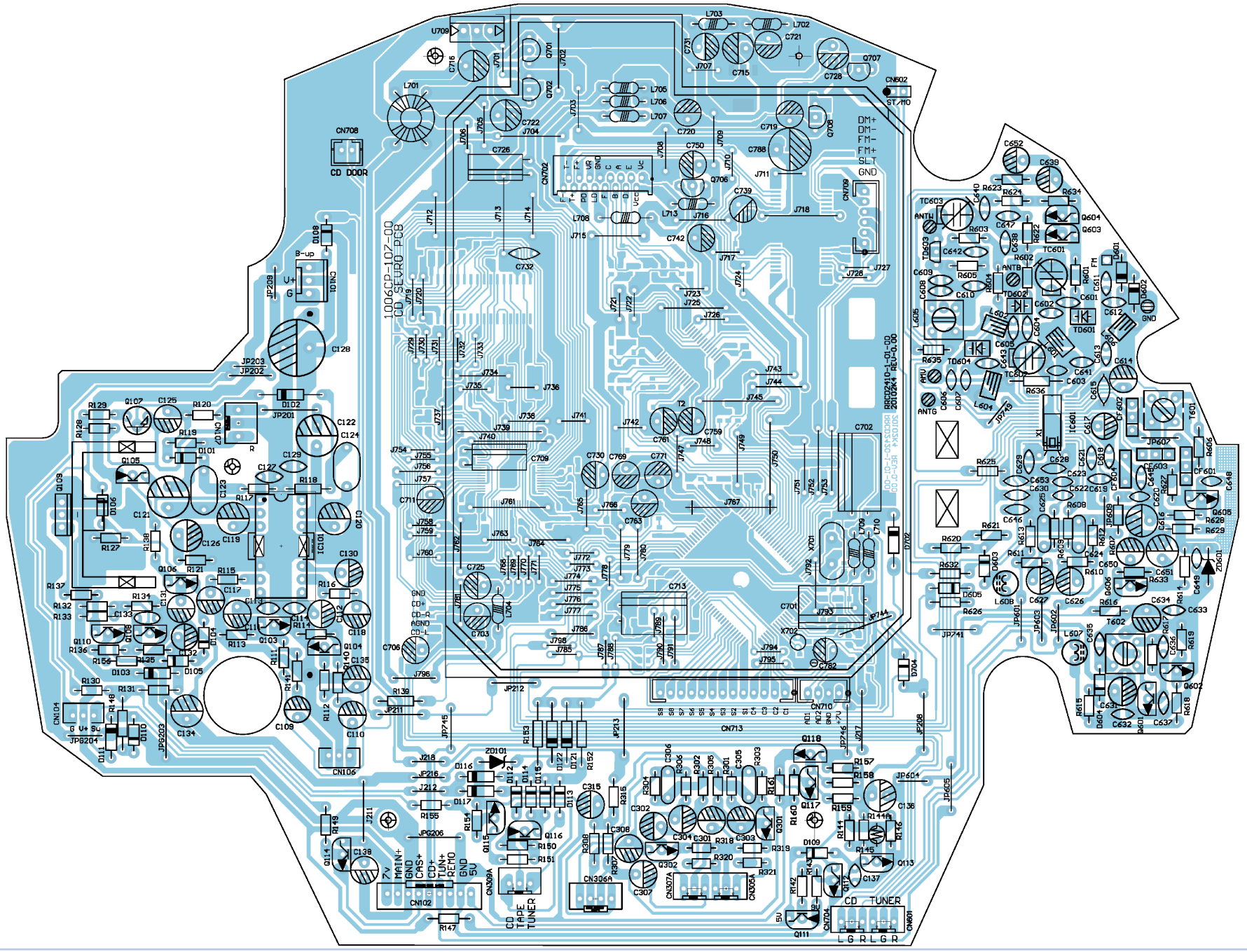

P504
DC IN
P502
AC2
D503
C503
P505
GND
C504
D504
D502
C505
C506
C502
C501
BAT. 3V
P506
D501
AC1
P501
DC OUT
P503

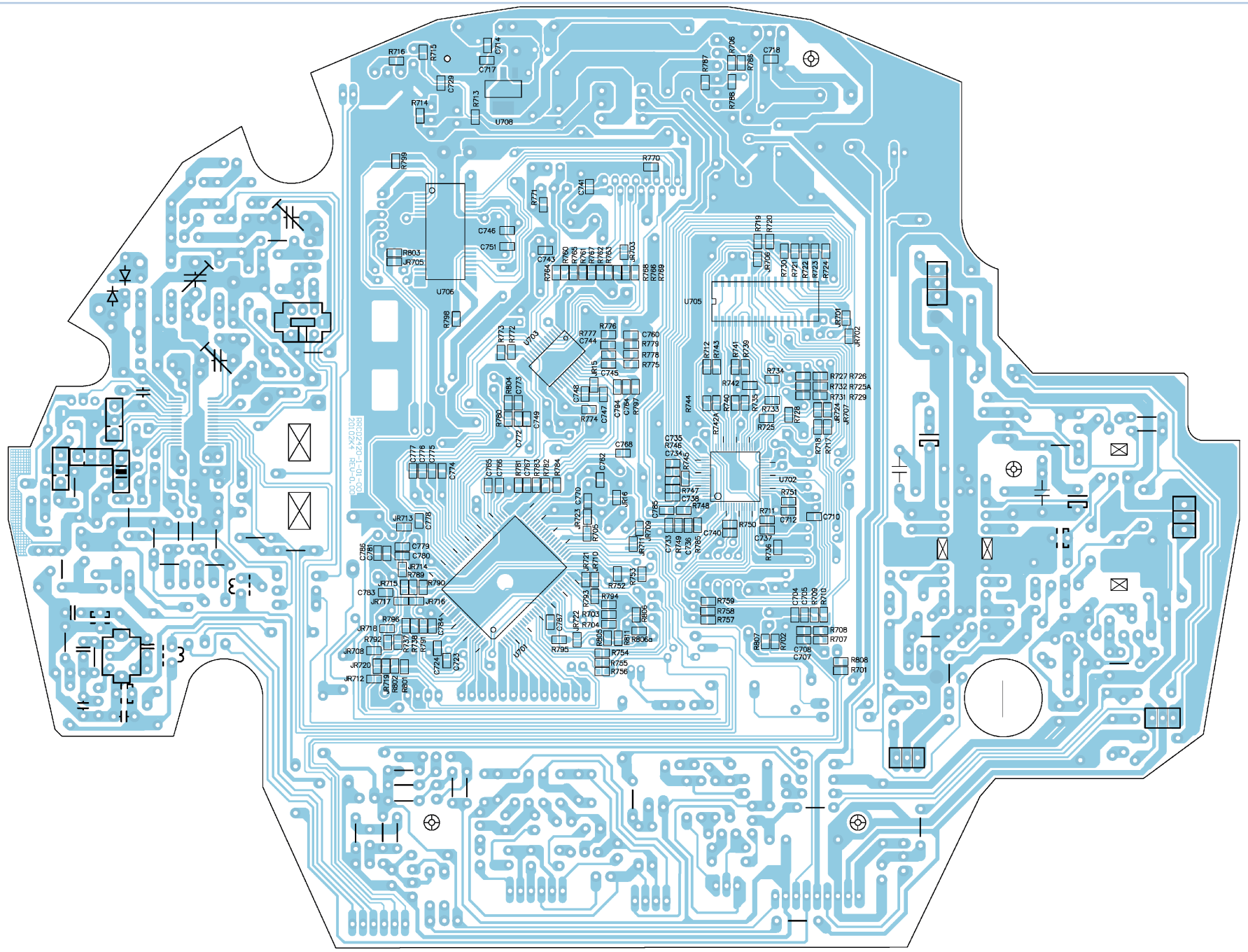

CN304
CN309
R314
R312
C312
AFGND
R310
C314
C310
VR IN
CN307
R313
C309
R309
C313
R311
C311
VR OUT
CN308
CN306
SW302
VR301
JP303
JP304
JP302
TAPE
RADIO
CD
TUNER
SW301
JP306
JP301
CN303
CN302
CN301
C316
C317
IR301
JP305
JP307

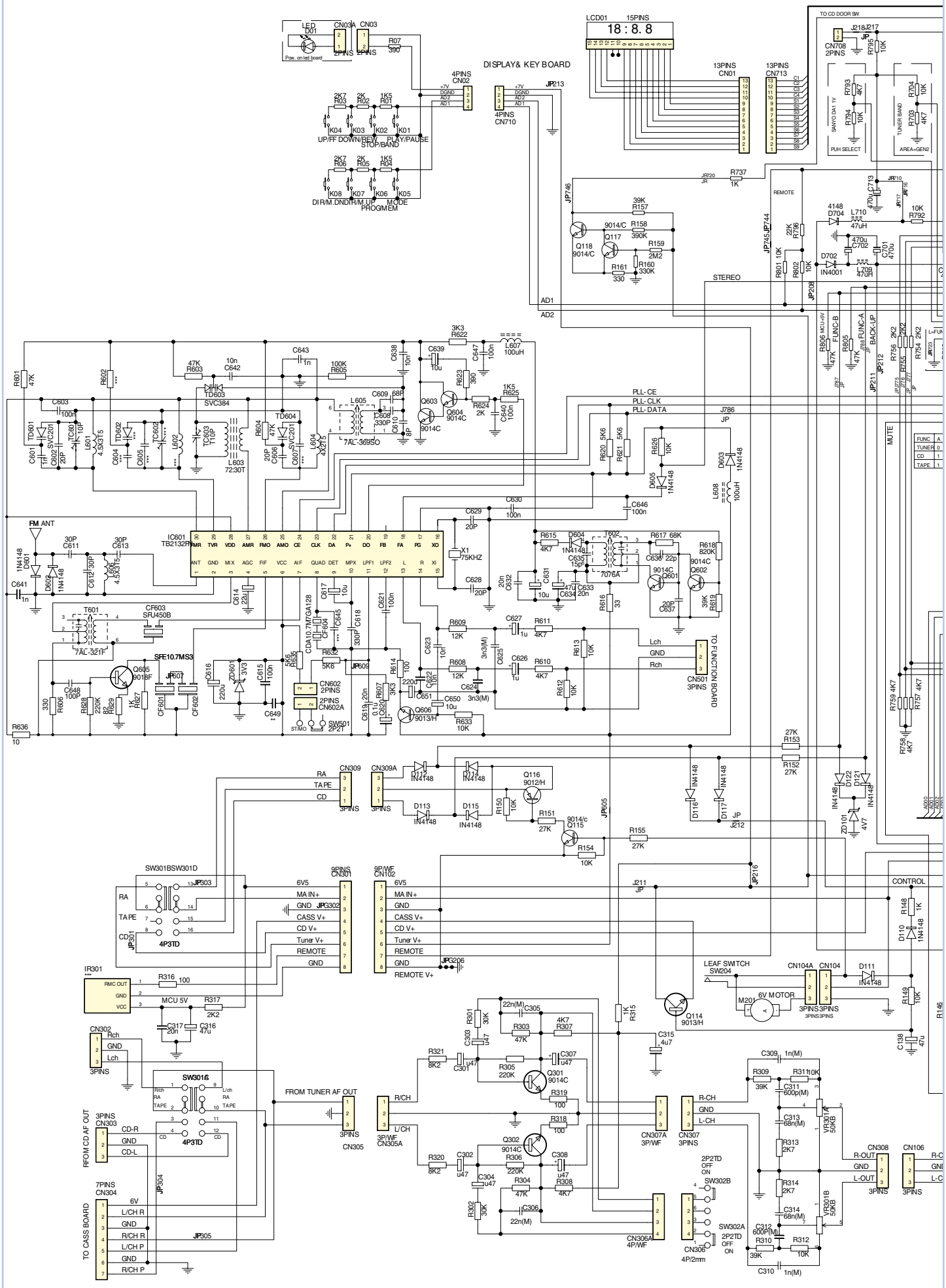

MONO
STEREO
RRCD2410/20
-1-07-00
C452

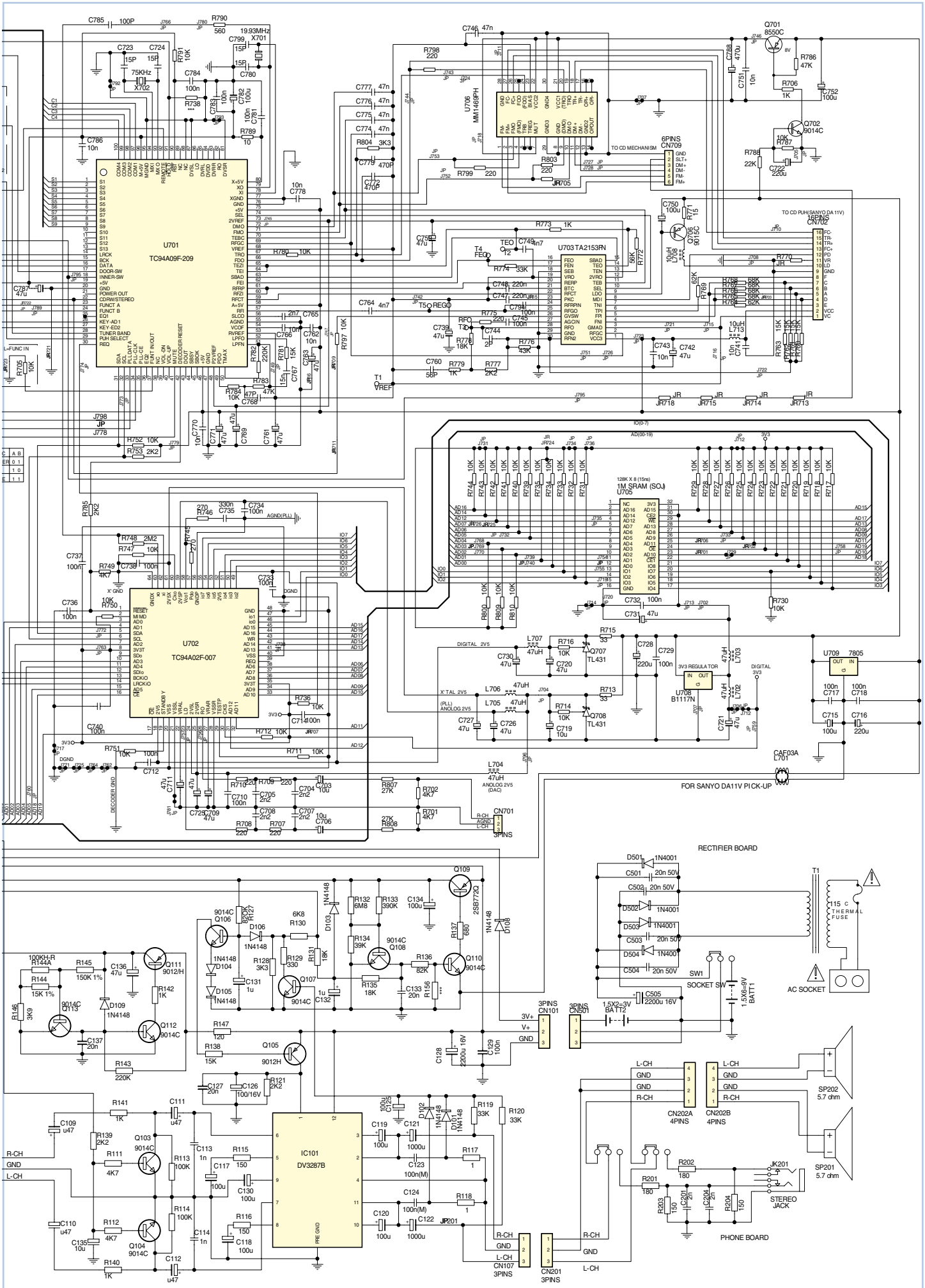

CN202
CN201
R201
R202
R203
R204
L201
L202
L203

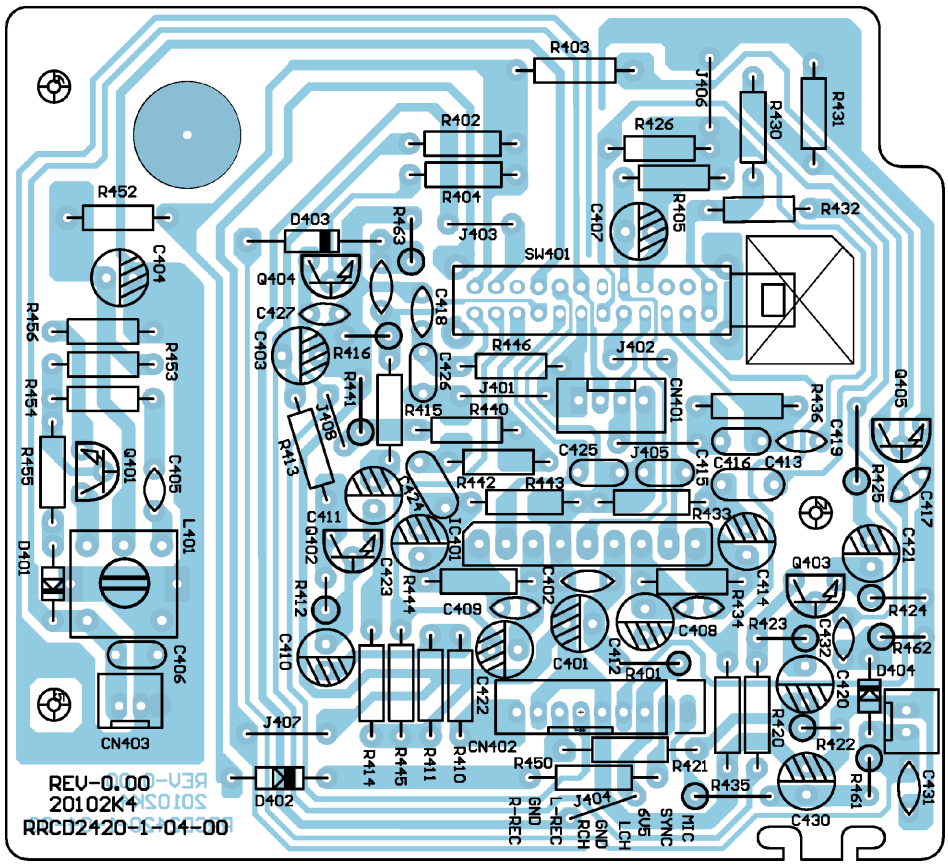

D01
CN03A

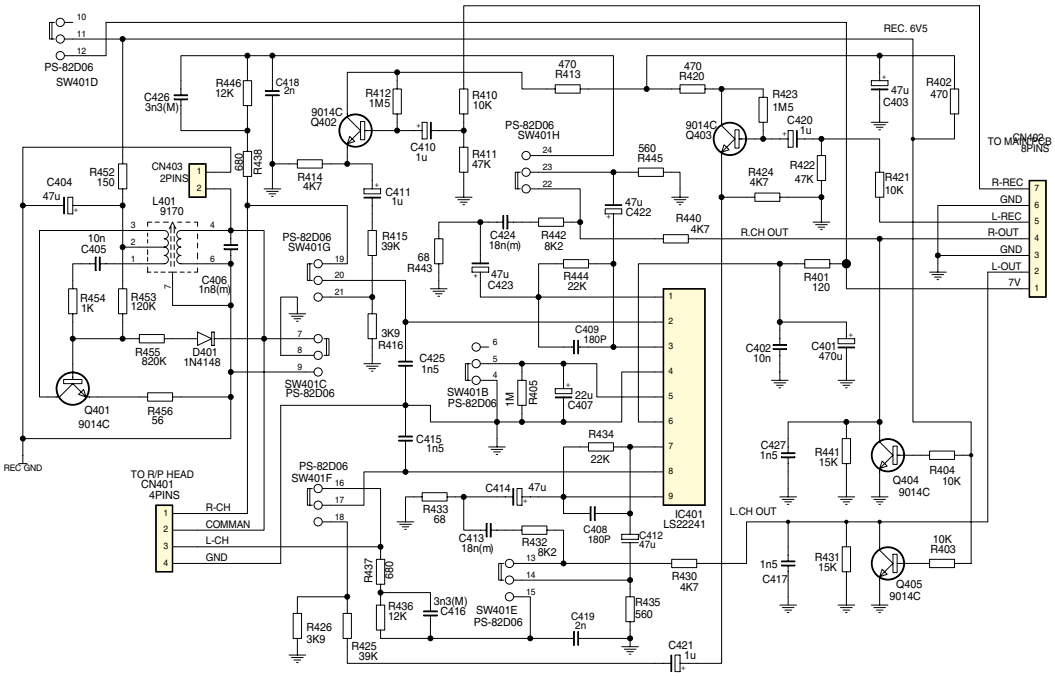

1006CD-107-00
CD SEVRO PCB
CD DOOR
CN708
CN602
ST/MO
DM+
DM-
FM-
FM+
SLT
GND
CD TUNER
CD TAPE TUNER
MAIN+
CAS+
CD+
TUN+
REMO
GND
5V
7V
L G R L G R

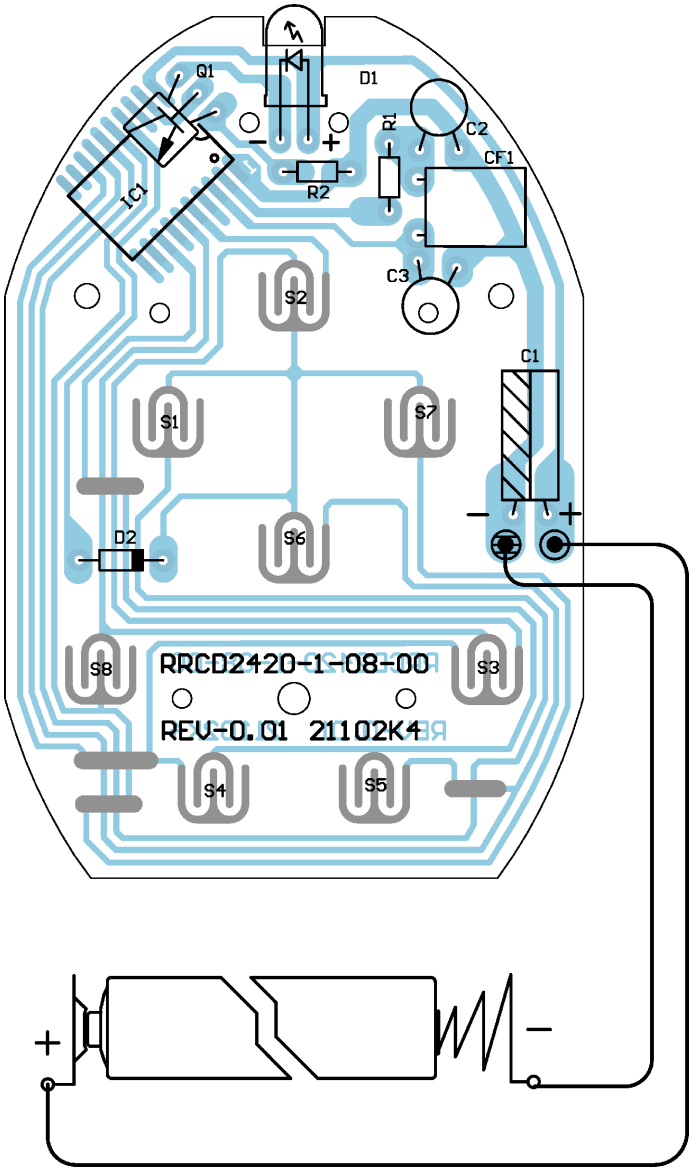


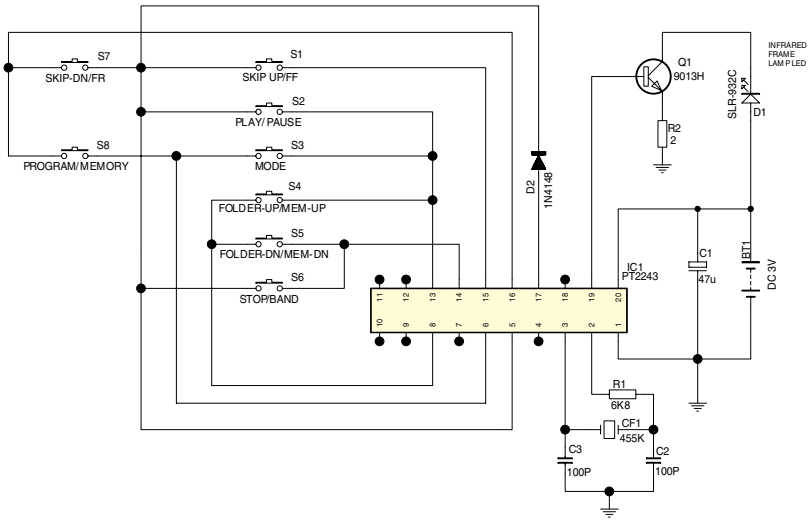

DISPLAY& KEY BOARD
LCD01 15PINS
18 : 8. 8
CN01 13PINS
CN713 13PINS
CN710 4PINS
CN02 4PINS
CN03A CN03
LED D01
Pow. on led board
2PINS 2PINS
R07 390
UP/FF DOWN/REV STOP/BAND PLAY/PAUSE
DIR/M.DN DIR/M.UP PROGMEM MODE
K01 K02 K03 K04 K05 K06 K07 K08
2K7 R03 2K R02 1K5 R01
2K7 R06 2K R05 1K5 R04
JP213
AD1
AD2
TO CD DOOR SW
CN708 2PINS
J18 J17 JP
R795 10K
R793 4K7
R794 10K
R704 10K
R703 4K7
SANYO DA1 1V
PUH SELECT
TUNER BAND
AREA=GEN2
REMOTE
STEREO
JP746
JP745 JP744
JP208
JP212
JP211
R737 1K
R157 39K
R158 390K
R159 2M2
R160 330K
R161 330
Q118 9014/C
Q117 9014/C
R798 22K
R801 10K
R802 10K
D704 4148
L710 47uH
D702 IN4001
L709 470uH
C702 470u
C701 470u
R792 10K
C713 470u
R806 47K
R805 47K
R756 2K2
R755 2K2
R754 2K2
FUNC-B
FUNC-A
BACK-UP
MUTE
FUNC A
TUNER 0
CD 1
TAPE 1
R601 47K
R602
C603 100n
TD601 SVC201
TC601 10P
L601 4.5X315
TD602
TC602
TC603 T10P
L602
L603 72:30T
TD603 SVC384
R603 47K
C642 10n
C643 1n
R605 100K
C638 10n
C639 10u
C647 100n
L607 100uH
R622 3K3
R623 390
Q603
Q604 9014C
9014C
R624 2K
C640 100n
R625 1K5
C609 68P
C610 8P
L605 7AL-369SO
TD604
R604 47K
C606 20P
C607 SVC201
L604 4X215
C604
C605
TC603
PLL-CE
PLL-CLK
PLL-DATA
J786
JP
R620 5K6
R621 5K6
R626 10K
D605 1N4148
D603 1N4148
L608 100uH
C630 100n
C646 100n
FM ANT
C611 30P
C613 30P
D601 1N4148
D602 1N4148
L606 4.5X315
C612 30P
C641 1n
IC601 TB2132FN
PMR TVR VDD AMR FMO AMO CE CLK DA P5 DO FB FA FG XO
ANT GND MIX AGC FIF VCC AIF QUAD DET MPX LPF1 LPF2 L R XI
X1 75KHZ
C629 20P
C628 20P
C632 20n
C631 10u
C634 47u
C633 20n
R615 4K7
D604 1N4148
T602 7076A
C635 15p
R617 68K
R618 820K
Q602 9014C
Q601 9014C
C638 22p
C636 20P
R619 39K
R616 33
C637 20P
C614 22u
C617 10u
C621 100n
T601 7AL-321F
CF603 SRJ450B
CDA10.7MY/GA128
CF604
C645
C618 330P
R632 5K6
JP609
R634 5K6
R635 5K6
C623 10n
C625 3n3(M)
C626 1u
C627 1u
R609 12K
R608 12K
C624 3n3(M)
R611 4K7
R610 4K7
R613 10K
R612 10K
C622 2200P
C651
C650 10u
R633 10K
Q606 9013/H
R614 100
R607 3K3
C619 20n
C620 47n
SW501 2P21
SW301 BSW301D
JP303
JP301
4P3TD
RA
TAPE
CD
6V5
MA IN+
GND
CASS V+
CD V+
Tuner V+
REMOTE
GND
REMOTE V+
CN309 3PINS
CN309A 3PINS
CN301 9PINS
CN102 9P/WF
JP302
JP206
D112 IN4148
D114 IN4148
D113 IN4148
D115 IN4148
Q116 9012/H
R150 10K
R151 27K
Q115 9014/c
R154 10K
R155 27K
JP605
R153 27K
R152 27K
D116 IN4148
D117 IN4148
D122 IN4148
D121 IN4148
ZD101 4V7
JP212
JP216
J211 JP
CONTROL
R148 1K
D110 1N4148
R149 10K
R146
C138 47u
LEAF SWITCH SW204
CN104A CN104
D111 IN4148
M201 6V MOTOR
Q114 9013/H
3PINS 3PINS
IR301
RMC OUT
GND
VCC
R316 100
MCU 5V
R317 2K2
C317 20n
C316 47u
CN302 3PINS
Rch
GND
Lch
SW3016
R/ch RA TAPE
L/ch RA TAPE
FROM TUNER AF OUT
CN305 3PINS
R/CH
L/CH
3P/WF CN305A
CN307A 3P/WF
CN307 3PINS
R-CH
GND
L-CH
RFOM CD AF OUT
3PINS CN303
CD-R
GND
CD-L
4P3TD
7PINS CN304
6V
L/CH R
GND
R/CH R
L/CH P
GND
R/CH P
TO CASS BOARD
JP304
JP305
R301 30K
R303 47K
R307 4K7
C305 22n(M)
C303 u47
C301 u47
R321 8K2
R305 220K
Q301 9014C
R319 100
R318 100
C307 u47
R315 1K
C315 4u7
R320 8K2
C302 u47
Q302 9014C
R306 220K
C308 u47
C304 u47
R304 47K
R308 4K7
R302 30K
C306 22n(M)
CN306A 4P/WF
CN306 4P/2mm
SW302B 2P2TD OFF ON
SW302A 2P2TD OFF ON
C309 1n(M)
R309 39K
R311 10K
C311 600p(M)
VR301A 50KB
C313 68n(M)
R313 2K7
R314 2K7
C314 68n(M)
VR301B 50KB
C312 600P(M)
R310 39K
R312 10K
C310 1n(M)
CN308
R-OUT
GND
L-OUT
3PINS
CN106
3PINS

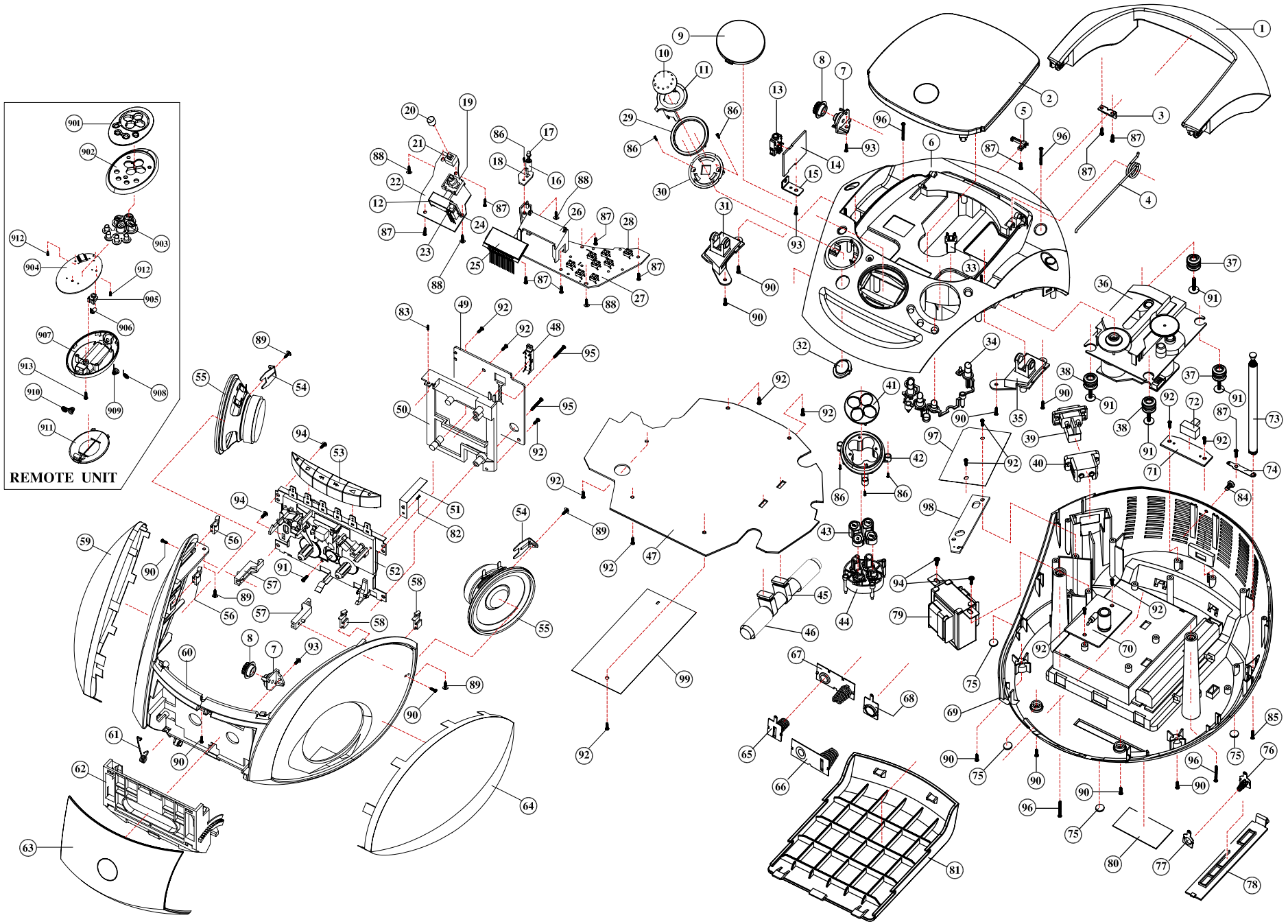

U701
TC94A09F-209
U702
TC94A02F-007
U706
MM1469PH
U703 TA2153FN
U705
1M SRAM (SOJ)
128K X 8 (15ns)
IC101
DV3287B
Q701
8550C
Q702
9014C
Q703
9014C
Q704
9014C
Q705
9012H
Q706
9015C
Q707
TL431
Q708
TL431
U708
B1117N
U709
7805
6PINS
CN709
TO CD MECHANISM
16PINS
CN702
TO CD PUH(SANYO DA 11V)
FOR SANYO DA11V PICK-UP
CN701
3PINS
RECTIFIER BOARD
D501
1N4001
D502
1N4001
D503
1N4001
D504
1N400
SW1
SOCKET SW
AC SOCKET
T1
115 C
THERMAL
FUSE
CN101
3PINS
CN501
3PINS
1.5X2=9V
BA T12
1.5X6=9V
BATT1
CN202A
4PINS
CN202B
4PINS
SP202
5.7 ohm
SP201
5.7 ohm
JK201
STEREO
JACK
PHONE BOARD
CN107
3PINS
CN201
3PINS
L-FUNC IN
DIGITAL 2V5
ANOLOG 2V5
(DAC)
(PLL)
X'TAL 2V5
3V3 REGULATOR
DIGITAL
3V3
CAF03A
C701
19.93MHz
X701
75KHz
X702
R-CH
GND
L-CH
3V+
V+
GND


REV-0.00
20102K4
RRCD2420-1-04-00

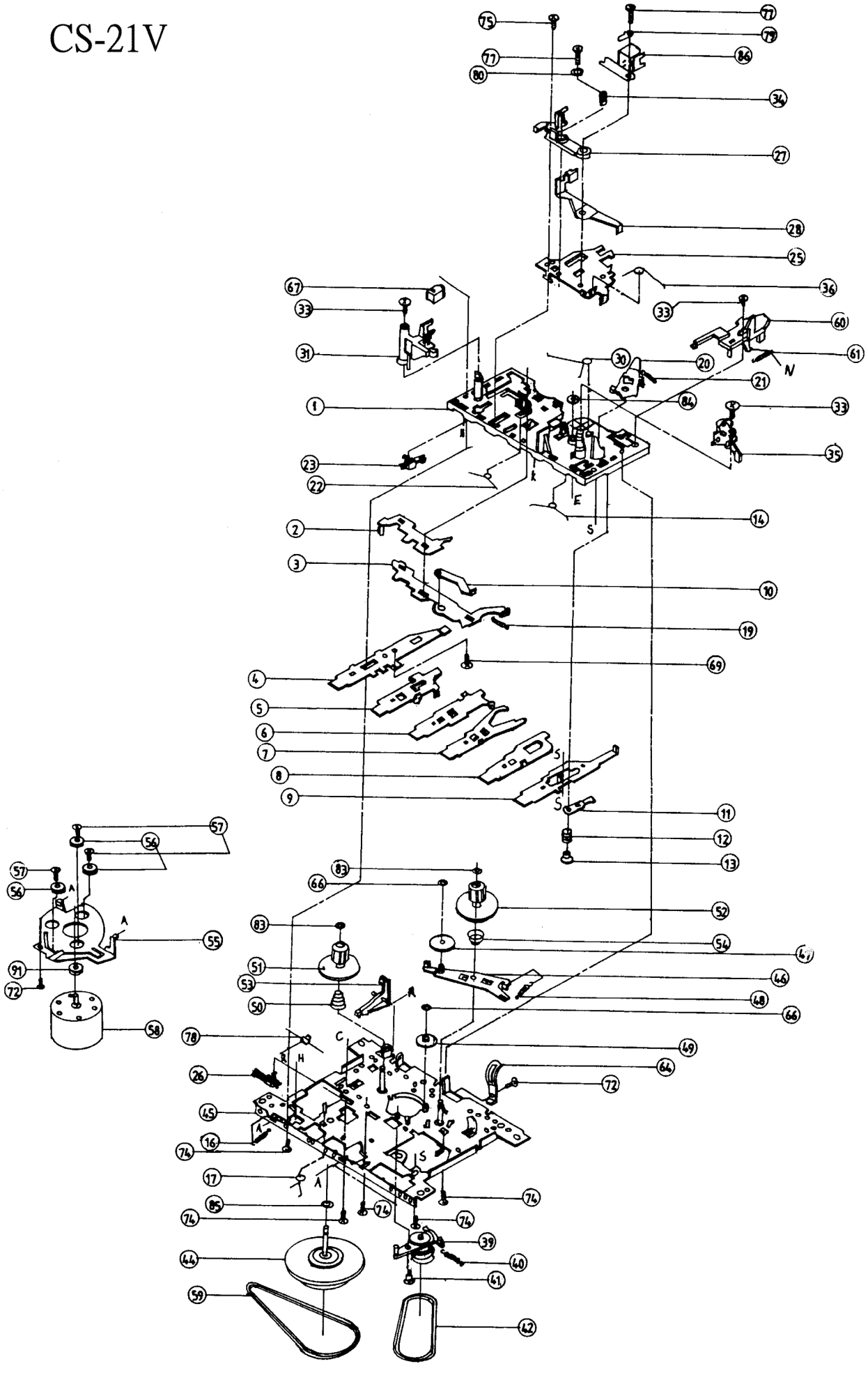

PS-82D06
SW401D
REC. 6V5
TO MAIN PCB
CN402
8PINS
R-REC
GND
L-REC
R-OUT
GND
L-OUT
7V
R.CH OUT
L.CH OUT
REC GND
TO R/P HEAD
CN401
4PINS
R-CH
COMMAN
L-CH
GND
IC401
LS22241


Q1
D1
R1
C2
CF1
IC1
R2
C3
S2
C1
S1
S7
D2
S6
S8
RRCD2420-1-08-00
S3
REV-0.01 21102K4
S4
S5


S7
SKIP-DN/FR
S1
SKIP UP/FF
S2
PLAY/PAUSE
S8
PROGRAM/MEMORY
S3
MODE
S4
FOLDER-UP/MEM-UP
S5
FOLDER-DN/MEM-DN
S6
STOP/BAND
D2
1N4148
Q1
9013H
R2
2
INFRARED
FRAME
LAMP LED
SLR-932C
D1
IC1
PT2243
C1
47u
BT1
DC 3V
R1
6K8
CF1
455K
C3
100P
C2
100P

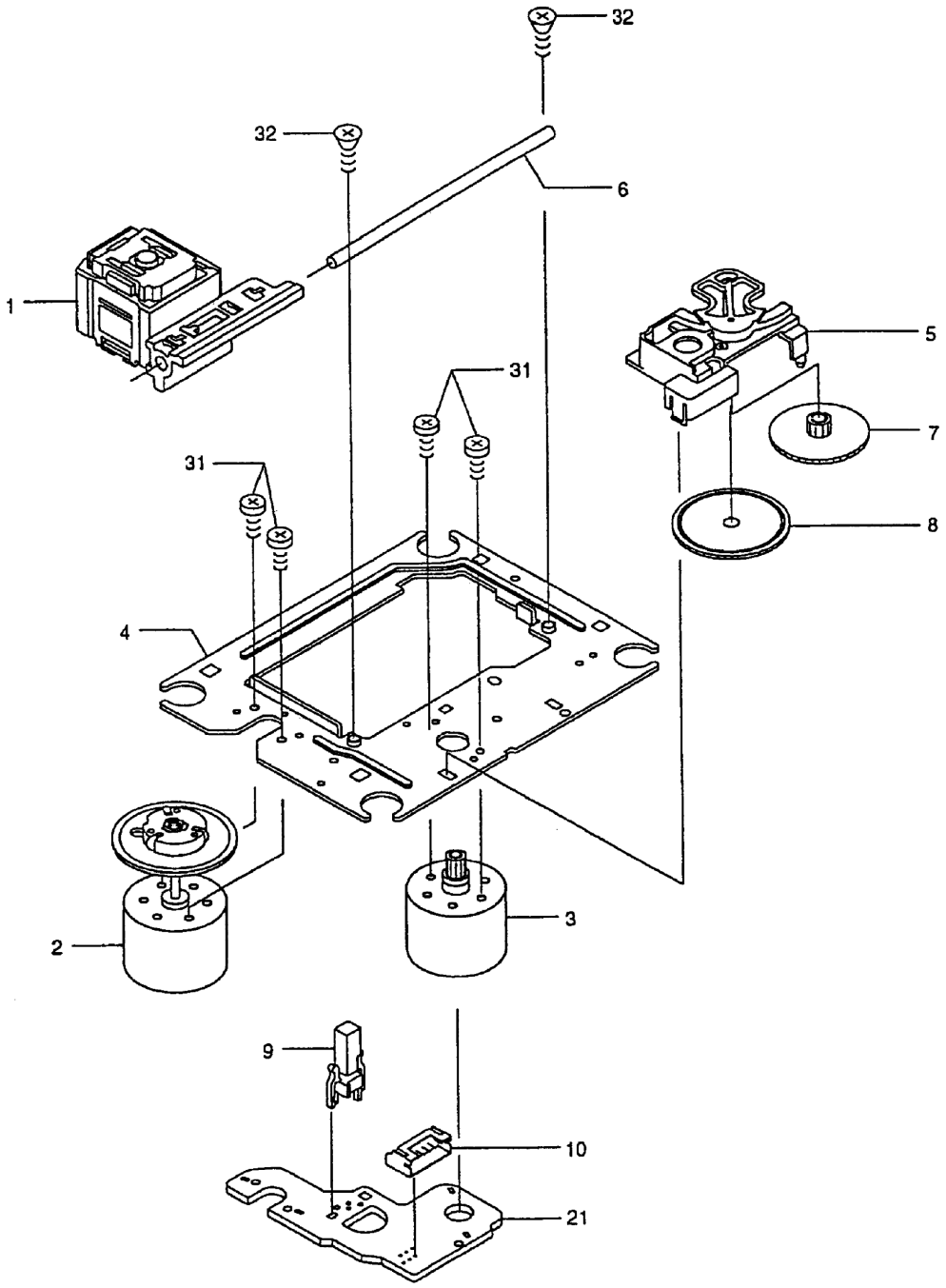

REMOTE UNIT

CS-21V



SANYO DA11B3V

CD PLAYER MECHANISM EXPLODED VIEW



GRUNDIG

Ersatzteilliste
Spare Parts List

NUR FÜR INTERNEN GEBRAUCH
FOR INTERNAL USE ONLY

AUDIO

3 / 2005

RRCD 2420 MP3

MATERIAL-NR. / PART NO.: 757123475000
BESTELL-NR. / ORDER NO.: GDP5300 CHROME/VERO

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		757123475000		RRCD 2420 MP3 CHROME/VERO **TAUSCHGERAET**	RRCD 2420 MP3 CHROME/VERO **EXCHANGE SET**
0001.000		759551127800		TRAGEGRIFF	HANDLE
0002.000		759551127900		TUER CD	CD DOOR
0004.000		759551126900		FEDER CD TUER	SPRING CD DOOR
0036.000	⚠	759550615100		LAUFWERK CD DA11-T3CN	CD MECHANISM DA11-T3CN
0052.000		759551088900		LAUFWERK CASS. THL-21VB-1933A	CASS. MECHANISM THL-21VB-1933
0053.000		759551128000		TASTENSATZ CASSETTE	TASTE SET CASSETTE
0061.000		759551126800		FEDER TUER CASSETTE	SPRING CASSETTE DOOR
0062.000		759551128100		EINSATZ CASSETTE	EMPLOYMENT CASSETTE
0063.000		759551127700		TUER CASSETTE	CASSETTE DOOR
0073.000		759551126600		TELESKOPANTENNE	TELESKOPANTENNE
0078.000		759551128300		ABDECKUNG SPEICHERBATTERIE	DOOR BATTERIE MEMORY
0081.000		759551128200		BATTERIEFACHABDECKUNG	DOOR BATTERY
0100.000	⚠	759551126700		NETZANSCHLUSSKABEL	AC POWER CORD
0900.000		759551110100		FERNBEDIENUNG	REMOTE CONTROL
0911.000		759551128400		BATTERIEFACHDECKEL FERNBED.	BATTERIE DOOR REMOTE CONTROL
		720114051000		BEDIENUNGSANLEITUNG D/GB/F/I/P/E/NL/PL/DK/S/FIN	INSTRUCTION MANUAL D/GB/F/I/P/E/NL/PL/DK/S/FIN

Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Mat.-Nummer 720108000001, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!

⚠
(!)

The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 720108000001, as well as the respective national deviations.

ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION